

or heterocyclic group are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl, haloalkyl, arylalkyl, alkoxy, alkylthio, alkoxyalkyl, alkylsulfonyl, hydroxy, amino, monoalkylamino, dialkylamino, carboxy, cyano and nitro.

**13.** The heterocyclic compound according to claim 10, wherein R<sup>91</sup> and R<sup>92</sup> are the same or different and each represents optionally substituted phenyl, and the substituents are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl and alkoxy,

Y<sup>9</sup> represents N, and Z<sup>9</sup> represents CH,

A<sup>9</sup> represents NR<sup>97</sup>, and R<sup>97</sup> represents alkyl,

D<sup>9</sup> represents alkylene,

E<sup>9</sup> single bond,

G<sup>9</sup> represents O,

R<sup>93</sup> and R<sup>94</sup> are the same or different and each represents hydrogen or alkyl,

Q<sup>9</sup> represents carboxy or a group represented by the formula (22z), R<sup>910</sup> represents amino, monoalkylamino, dialkylamino, hydroxy, optionally substituted alkyl, optionally substituted aryl, optionally substituted aryloxy, or optionally substituted heterocyclic group, and the substituents of alkyl, aryl, aryloxy or heterocyclic group are the same or different and 1 to 3 substituents are selected from the group consisting of halogen, alkyl, haloalkyl, arylalkyl, alkoxy, alkylthio, alkoxyalkyl, alkylsulfonyl, hydroxy, amino, monoalkylamino, dialkylamino, carboxy, cyano and nitro.

**14.** The heterocyclic compound according to claim 10, wherein the heterocyclic compound is selected from the following compounds (1) to (27):

- (1) 2-{4-[N-(5,6-di-p-tolylpyrazin-2-yl)-N-methylamino]butyloxy}acetic acid,
- (2) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-methylamino]butyloxy}acetic acid,
- (3) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetic acid,
- (4) 2-{4-[N-(5,6-di-p-tolylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetic acid,
- (5) 2,3-diphenyl-5-{N-[4-(carboxymethoxy)butyl]-N-methylamino}pyrazine 1-oxide,
- (6) 7-[N-(5,6-diphenylpyrazin-2-yl)-N-methylamino]heptanoic acid,
- (7) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butylthio}acetic acid,
- (8) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-methylamino-(Z)-2-buten-1-yloxy}acetic acid,
- (9) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-ethylamino]butyloxy}acetic acid,

- (10) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butylsulfinyl}acetic acid,
  - (11) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(p-toluenesulfonyl)acetamide,
  - (12) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(isopropylsulfonyl)acetamide,
  - (13) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(trifluoromethanesulfonyl)acetamide,
  - (14) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(o-toluenesulfonyl)acetamide,
  - (15) N-(benzenesulfonyl)-2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetamide,
  - (16) N-(4-chlorobenzenesulfonyl)-2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetamide,
  - (17) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(4-methoxybenzenesulfonyl)acetamide,
  - (18) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(4-fluorobenzenesulfonyl)acetamide,
  - (19) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(2-thiophenesulfonyl)acetamide,
  - (20) N-(aminosulfonyl)-2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetamide,
  - (21) N-(N,N-dimethylaminosulfonyl)-2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetamide,
  - (22) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(morpholin-4-ylsulfonyl)acetamide,
  - (23) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(pyrrolidin-1-ylsulfonyl)acetamide,
  - (24) N-[2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetyl]sulfamic acid phenyl ester,
  - (25) N-[2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetyl]sulfamic acid,
  - (26) N-[2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}acetyl]sulfamic acid sodium salt, and
  - (27) 2-{4-[N-(5,6-diphenylpyrazin-2-yl)-N-isopropylamino]butyloxy}-N-(methylsulfonyl)acetamide.
- 15.** A method of treating pulmonary hypertension, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 1.

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